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**APPEAL BRIEF TRANSMITTAL**

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Application Number  
**10/049,363**

Filing Date  
**July 16, 2002**

Examiner  
**Fleming SAETHER**

Art Unit  
**3677**

Invention Title  
**SNAP RING**

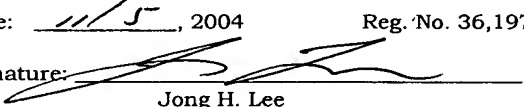
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Further to the Notice of Appeal dated July 1, 2004 (filed at the PTO on July 6, 2004) for the above-referenced application, enclosed are three copies of an Appeal Brief. Accompanying the Appeal Brief is the Appendix to the Appeal Brief.

The Commissioner is hereby authorized to charge payment of the 37 C.F.R. § 1.17(c) appeal brief filing fee of **\$340.00**, a two-month extension fee of **\$430.00** and any additional fees associated with this communication to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600**.

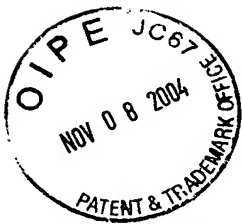
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[10191/2234]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicants : Karl FRAUHAMMER et al.  
Serial No. : 10/049,363  
Filing Date : July 16, 2002  
For : SNAP RING  
Examiner : Fleming SAETHER  
Art Unit : 3677  
Confirmation No. : 9974

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Jong H. Lee

**APPELLANTS' APPEAL BRIEF**  
**UNDER 37 C.F.R. § 1.192**

S I R :

Applicants filed a Notice of Appeal dated July 1, 2004 (filed at the PTO on July 6, 2004) appealing from the Final Office Action dated February 2, 2004, in which claims 10-16 of the above-identified application were finally rejected. This Brief is submitted by Applicants in support of their appeal.

**I. REAL PARTY IN INTEREST**

The above-identified Applicants and Robert Bosch GmbH of Stuttgart, Germany, are the real parties in interest.

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## **II. RELATED APPEALS AND INTERFERENCES**

No appeal or interference which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal is known to exist to the undersigned attorney or is believed by the undersigned attorney to be known to exist to Applicants.

## **III. STATUS OF CLAIMS**

Claims 10-16 are pending in this application, with claims 1-9 having been canceled in the Preliminary Amendment dated February 6, 2002. Of the claims presently on appeal, claims 10 and 16 are independent; claims 11-13 are dependent on claim 10; claim 14 depends on claim 13; and claim 15 depends on claim 14.

## **IV. STATUS OF AMENDMENTS**

No claim amendment has been made subsequent to the final Office Action mailed on February 2, 2004.

## **V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

The snap ring according to the present invention provides the advantage that, in addition to the axial retaining function, it also enables a centering action to be performed between a bore and a shaft or spindle to be inserted therein during assembly. In this manner, one can prevent a shaft sealing ring located between a bore and a shaft from becoming damaged, for example, by sharp edges or offsets during assembly due to the shaft and bore becoming skewed, and one can thus avoid a premature failure of the sealing action of the shaft sealing ring. (Substitute spec., p. 1, l. 24 - p. 2, l. 1). Due to the fact that the radial cross-sections of the two limbs of the snap ring taper off towards their unattached ends, the snap ring is uniformly deformed in response to its two limbs being compressed upon installation. (P. 2, l. 3-6).

In Figure 1, 10 denotes a snap ring which has a concentrically

disposed, or approximately annular, slotted clip 11 of resilient material, in particular of spring steel, and at its two free ends, clip 11 has lugs 12, 13, through each of which perforations 14, 15 are cut. (P. 2, l. 22-26). Into perforations 14, 15, one may insert snap ring pliers, which, by changing the distance between lugs 12, 13, make it possible to vary the diameter of clip 11 in order to install snap ring 10. (P. 2, l. 26-30).

In Figure 1, snap ring 10 is designed as an internal ring for a radially inwardly open circumferential groove and is, therefore, suited for axially securing a component to a bore. (P. 2, l. 32-34). Located inside clip 11 is a centering ring 17, which is joined to clip 11 by way of a web 16. (P. 2, l. 35 - p. 3, l. 1). Centering ring 17 is provided with a center bore 18, which is disposed approximately concentrically to snap ring 10 and to a corresponding circumferential groove into which snap ring 10 is insertable. (P. 3, l. 1-5). On the side of clip 11 facing opposite web 16, a notch 19 is provided, which divides clip 11 into two limbs 11a and 11b, which are formed with a radial cross-section that tapers off toward the unattached ends, resulting in a uniform deformation when snap ring 10 is installed. (P. 3, l. 5-9). Located at each of the mutually opposing surfaces of lugs 12, 13 are flat portions 12a, 13a, which are used as mutual stop faces. (P. 3, l. 9-11). In this context, flat portions 12a, 13a are aligned in parallel to radial traces 36, 37, respectively, which run through a midpoint 35 of snap ring 10. (P. 3, l. 11-14). The stop faces ensure that the material stress that clip 11 is subject to during installation of snap ring 10 is kept within acceptable limits. (P. 3, l. 14-16).

Figure 2 illustrates a second exemplary embodiment of a snap ring 10 having a centering function. In comparison to the exemplary embodiment according to Figure 1, the second exemplary embodiment according to Figure 2 is distinguished by web 16 being located in the vicinity of a lug 12. (P. 3, l. 21-24). In this context, centering ring 17 is likewise encircled by clip 11, so that snap ring 10 shown in Figure 2 is likewise designed as an internal ring. (P. 3, l. 24-26).

Figure 3 depicts an application case for a snap ring 10 according to the present invention, with Figure 3 showing a partial section through a driving device 21 of a hammer drill. (P. 3, l. 28-30). In the left half of the illustration of Figure 3, the driving device is shown in a final assembled position, while in the right half, it is shown during assembly. (P. 3, l. 31-33). An electro-motor 22 has a motor shaft 23, which is provided on the inside with an armature pinion 24, with motor shaft 23 being rotationally mounted via an antifriction roller bearing 25 at a gear housing 26. (P. 3, l. 35 - p. 4, l. 3). Seated next to and in front of antifriction bearing 25 in a through-hole 27 in gear housing 26 is a sealing ring 28, which, by way of its sealing lip 29, seals off a gear compartment 30 from a motor compartment 31. (P. 4, l. 3-7). For that purpose, sealing lip 29 engages on the outer surface of motor shaft 23 (left half of the illustration in Figure 3). (P. 4, l. 7-9). Within through-hole 27, sealing ring 28 is axially secured by snap ring 10, which is seated, under prestressing, in a concentrically disposed, internal groove 32 in gear housing 26. (P. 4, l. 9-13).

In the right half of Figure 3, driving device 21 is shown in its assembled position. Here, antifriction bearing 25 is pressed onto motor shaft 23 and is installed, together with motor shaft 23 and electro-motor 22, in through-hole 27. (P. 4, l. 16-18). In so doing, armature pinion 24 initially reaches through centering bore 18 in centering ring 17, and is radially guided by the same. (P. 4, l. 18-21). In response to further insertion of driving device 21, armature pinion then reaches through the sealing opening formed by sealing lips 29, deeper into bore 27, until it subsequently engages fully with gears 33, 34 in gear compartment 30, as shown in the left half of the illustration. (P. 4, l. 21-25). Centering ring 17, which, together with snap ring 10, forms one unit, prevents the sealing lip from being damaged by armature pinion 24, which may be sharp-edged, during insertion of driving device 21. (P. 4, l. 26-29). To this end, centering bore 18 is designed to be approximately concentric to circumferential groove 32. (P. 4, l. 29-31).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The following grounds of rejection are presented for review on appeal in this case:

(A) Whether claims 10-15 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 2,450,306 ("Sickles") in view of U.S. Patent No. 3,765,065 ("Hay").

(B) Whether claims 10-14 are unpatentable under 35 U.S.C. §103(a) over WO 97/12170 ("Bartholomew") in view of U.S. Patent No. 3,765,065 ("Hay").

(C) Whether claim 15 is unpatentable under 35 U.S.C. §103(a) over WO 97/12170 ("Bartholomew") in view of U.S. Patent No. 3,442,171 ("Engelmann").

(D) Whether claim 16 is unpatentable under 35 U.S.C. §103(a) over Applicants' admitted prior art (AAPA) in view of Bartholomew and Hay.

## **VII. GROUPING OF CLAIMS**

For each ground of rejection, all claims subject to the rejection will be argued as a single group.

## **VIII. ARGUMENTS**

### **A. Rejection Based on Sickles and Hay**

Claims 10-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2,450,306 ("Sickles") in view of U.S. Patent No. 3,765,065 ("Hay"). Applicants respectfully submit that the rejection should be reversed for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This

teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*. In re Ratti, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959); M.P.E.P. §2143.01.

With respect to claim interpretation, pending claims must be interpreted not only **consistent with the specification**, In re Hyatt, 211 F.3d 1367, 1372 (Fed. Cir. 2000), but also **consistent with the interpretation that those skilled in the art would reach**. In re Cortright, 165 F.3d 1353, 1359 (Fed. Cir. 1999). Reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, **is a quite different thing from reading limitations of the specification into a claim**, to thereby narrow the scope of the claim. MPEP 2111.

Claim 10 recites, in relevant parts, “a substantially annular clip having two portions, each portion having two end sections, wherein ***for each portion of the annular clip, the radial cross-section decreases from one end section to the other end section,***” and “***a centering member radially separated from the clip.***” In support of the rejection, the Examiner contended

in the final Office Action the following: a) Fig. 5 of "Sickles discloses . . . a centering ring member 52"; b) "Hay discloses a snap ring comprising an annular clip (128) formed of two portions each having a radial cross-section which decreases from one end to the other"; and c) "it would have been obvious for one to . . . form the clip portion of Sickles with decreasing radial cross sections as disclosed in Hay in order to facilitate the flexing of the clip portions," since "decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force." (Final Office Action, pp. 2-3). However, Applicants note that the actual teachings of Sickles and Hay, as a whole, clearly contradict the Examiner's asserted modification, as explained in detail below.

First, element 52 shown in Fig. 5 of Sickles is actually described as "a hub 52," (col. 3, l. 13), and there is no indication that hub 52 is a "centering member." In fact, Sickles clearly indicates that "aperture 10" (shown in Fig. 1) and "hole 40" (shown in Fig. 4) are merely for **accommodating a rivet which secures the clip** to a shield. (Col. 2, l. 5-8; and col. 2, l. 54 - col. 3, l. 1). Accordingly, nothing in Sickles actually teaches or suggests "a centering member radially separated from the clip." In addition, Hay clearly fails to teach or suggest "a centering member radially separated from the clip."

Second, with respect to the Examiner's assertion concerning the teachings of Hay, there is absolutely no teaching or suggestion whatsoever in the specification of Hay **regarding the shape of the snap ring 128**. Even if one assumes for the sake of argument that the figures of Hay somehow show a snap ring with decreasing radial cross-section, there is simply no discussion **regarding the shape of the cross-section**, let alone the **reason for the particular shape of the cross-section**. Accordingly, the assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Sickles based on the teachings of Hay, i.e., "in order to facilitate the flexing of the clip portions," is simply unsupported.



Third, even if one assumes for the sake of argument that Hay would suggest to one of ordinary skill in the art to use a decreasing cross-section for the annular arms (with which conclusion Applicants do not agree), the teachings of Sickles clearly contradict the conclusion that one of ordinary skill would modify the clip of Sickles to incorporate ***decreasing cross-section for the annular arms*** in the manner of the present invention. In accordance with the present invention, “[d]ue to the fact that the radial cross-section of the two limbs of the snap ring taper off towards their unattached ends, the **snap ring is uniformly deformed in response to its two limbs being compressed** upon installation.” (Substitute Specification, p. 2, l. 2-6). However, ***uniform deformation*** of the two limbs is clearly contrary to the intended operation of the clip disclosed in Sickles, since Sickles teaches that “the curving part 16 is yieldable so that the legs 14 and 18 may be moved relatively and **the leg 18 may be moved downwardly relative to the leg 14 against the spring action of the portion 16.**” (Col. 2, l. 16-20). Accordingly, since incorporating the decreasing cross-section for the annular arms would tend to make the annular arms deform in uniform fashion, **which would be counter to the goal of enabling the leg 18 to move downwardly relative to the leg 14** against the spring action of the portion 16 in Sickles, there would be no reason to modify the design of the Sickles clip to have decreasing cross-section for the annular arms. In fact, the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, as well as changing the principle of operation of the prior art invention being modified, thereby defeating the obviousness conclusion as a matter of law. M.P.E.P. §2143.01.

Independent of the above, Applicants note that the Examiner’s asserted motivation for modifying the clip of Sickles with decreasing cross-section for the annular arms, i.e., “in order to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force,” is simply not applicable to the clip of Sickles since ***Sickles clearly indicates that flexibility is not an issue***: “the curving part

16 is yieldable so that the legs 14 and 18 may be moved relatively.” (Col. 2, l. 16-17). Accordingly, for this additional reason, there would be no reason to modify the design of the Sickles clip to have decreasing cross-section for the annular arms.

In view of the above discussion, Applicants respectfully submit that the combination of Sickles and Hay does not render obvious claim 10. Claims 11-15 depend from claim 10, so the above argument regarding claim 10 applies equally to claims 11-15, and the combination of Sickles and Hay also fails to render obvious claims 11-15 for at least this reason. For these reasons, the rejection of claims 10-15 in view of Sickles and Hay should be reversed.

**B. Rejection Based on Bartholomew and Hay**

Claims 10-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over PCT International Published Patent Application No. WO 97/12170 (“Bartholomew”) in view of Hay. Applicants respectfully submit that this rejection should be reversed for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the

desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*. In re Ratti, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959); M.P.E.P. §2143.01.

Claim 10 recites, in relevant parts, “a substantially annular clip having two portions, each portion having two end sections, wherein for each portion of the annular clip, the radial cross-section decreases from one end section to the other end section.” In support of the rejection, the Examiner cites the snap ring shown in Figs. 7 and 8 of Bartholomew, and the Examiner concludes that “it would have been obvious . . . to form the clip portion of Bartholomew **with decreasing radial cross section as disclosed in Hay in order to facilitate the flexing of the clip portions**,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force.” (Final Office Action, p. 3). However, there is absolutely ***no teaching or suggestion in the specification of Hay regarding the shape of the snap ring 128***, i.e., there is simply ***no discussion regarding the shape*** of the cross-section, let alone the reason for the particular shape of the cross-section. Furthermore, the Examiner’s asserted motivation for modifying the clip of Bartholomew with decreasing cross-section for the annular arms, i.e., “to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force,” is simply not applicable to the clip of Bartholomew since ***Bartholomew clearly indicates that flexibility is not an issue***: Bartholomew provides a **hand-release tab 68**, which **facilitate easy flexing** of the annular arms 64. (Bartholomew, p. 16, l. 1-4; Figs. 7-10). Accordingly, the

assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Bartholomew based on the teachings of Hay because of the alleged desire to facilitate “greater flexing at the ends” is simply unsupported.

In view of the above discussion, Applicants respectfully submit that the combination of Bartholomew and Hay does not render obvious claim 10. Claims 11-14 depend from claim 10, so the above argument regarding claim 10 applies equally to claims 11-14, and the combination of Bartholomew and Hay also fails to render obvious claims 11-14 for at least this reason. For these reasons, the rejection of claims 10-14 in view of Bartholomew and Hay should be reversed.

**C. Rejection Based on Bartholomew and Engelmann**

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bartholomew in view of U.S. Patent No. 3,442,171 (“Engelmann”). Applicants respectfully submit that this rejection should be reversed for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the

desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*. In re Ratti, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959); M.P.E.P. §2143.01.

Claim 15 ultimately depends from claim 10. Consequently, all claim limitations of claim 10 of the present application that Bartholomew and Engelmann do not teach or suggest are also not taught or suggested with respect to claim 15 of the present application. Bartholomew clearly doesn't teach or suggest that "for each portion of the annular clip, the radical cross-section decreases from one end section to the other end section." Furthermore, nothing in Engelmann teaches that "for each portion of the annular clip, the radical cross-section decreases from one end section to the other end section." Accordingly, even if there were some motivation to combine Bartholomew and Engelmann, the resulting combination would not render obvious the invention of parent claim 10.

Independent of the above, Applicants note that there would be no motivation to modify the clip of Bartholomew with decreasing cross-section for the annular arms since Bartholomew clearly indicates that flexibility of the annular arms is not an issue: Bartholomew provides **a hand-release tab** 68, which **facilitate easy flexing** of the annular arms 64. (Bartholomew, p. 16, l. 1-4; Figs. 7-10). Accordingly, the assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Bartholomew based on the teachings of Engelmann because of the alleged desire to facilitate "greater flexing at the ends" is simply unsupported.

In view of the above discussion, Applicants respectfully submit that the combination of Bartholomew and Engelmann does not render obvious claim 10, from which claim 15 ultimately depends. Accordingly, the obviousness rejection of claim 15 should be reversed.

**D. Rejection Based on AAPA, Bartholomew and Hay**

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Applicants' admitted prior art ("AAPA") in view of Bartholomew and Hay. Applicants respectfully submit that this rejection should be reversed for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not

sufficient to render the claims *prima facie obvious*. In re Ratti, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959); M.P.E.P. §2143.01.

Claim 16 recites “a substantially annular clip having two portions, each portion having two end sections, wherein for each portion of the annular clip, the radial cross-section decreases from one end section to the other end section.” In support of the rejection, the Examiner contends the following: a) the AAPA “describes a method wherein a snap ring is inserted into a groove to retain a sealing ring”; b) the combination of Bartholomew and Hay discloses the snap ring recited in claim 16; and c) “it would have been obvious . . . to use a snap ring as disclosed in modified Bartholomew in an application as described in the [AAPA] since the snap ring in modified Bartholomew would provide for easy installation.” (Final Office Action, p. 4). However, there would be no logical motivation for making the combination between Bartholomew and Hay (to arrive at the “modified Bartholomew”) as asserted by the Examiner, for the reasons explained in detail below.

First, there is absolutely no teaching or suggestion in the specification of Hay regarding the shape of the snap ring 128, i.e., there is simply no discussion regarding the shape of the cross-section, let alone the reason for the particular shape of the cross-section. Furthermore, the Examiner’s asserted motivation for modifying the clip of Bartholomew with decreasing cross-section for the annular arms (as explained by the Examiner in connection with the rejection of claims 10-15), i.e., “to facilitate the flexing of the clip portions,” since “decreasing cross section of the clip portion would allow for greater flexing at the ends which in turn would make it easier to operate the clip by requiring less force,” is simply not applicable to the clip of Bartholomew since Bartholomew clearly indicates that flexibility is not an issue: Bartholomew provides a hand-release tab 68, which facilitate easy flexing of the annular arms 64. (Bartholomew, p. 16, l. 1-4; Figs. 7-10). Accordingly, the assertion that one of ordinary skill in the art would derive any motivation to modify the clip of Bartholomew based on the teachings of Hay because of the

alleged desire to facilitate "greater flexing at the ends" is simply unsupported. Furthermore, since there would be no logical motivation for making the combination between Bartholomew and Hay to arrive at the "modified Bartholomew" as asserted by the Examiner, the asserted obviousness conclusion based on the combination of AAPA, Bartholomew and Hay necessarily fails.


For at least the reasons discussed above, the obviousness rejection of claim 16 should be reversed.

**IX. CONCLUSION**

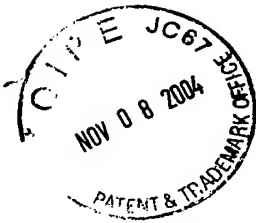
For the foregoing reasons, it is respectfully submitted that the final rejections of claims 10-16 should be reversed.

Respectfully submitted,  
KENYON & KENYON

Dated: 11/5, 2004

By:   
Richard L. Mayer  
Reg. No. 22,490  
  
R. NO. 36,197 )  
**CUSTOMER NO. 26646**  
PATENT & TRADEMARK OFFICE





[10191/2234]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

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Applicants : Karl FRAUHAMMER et al.  
Serial No. : 10/049,363  
Filing Date : July 16, 2002  
For : SNAP RING  
Examiner : Fleming SAETHER  
Art Unit : 3677  
Confirmation No. : 9974

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, Alexandria, VA 22313-1450 on

Date: 11/5, 2004

Reg. No. 36,197

Signature: \_\_\_\_\_

Jong H. Lee

**APPENDIX TO APPELLANTS' APPEAL BRIEF  
UNDER 37 C.F.R. § 1.192**

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S I R :

The claims involved in this appeal, claims 10-16, in their current form after entry of all amendments presented during the course of prosecution, are set forth below:

**APPEALED CLAIMS:**

10. A snap ring for shafts or bores fixable in axial position by snapping into a circumferential groove, the snap ring comprising:

a substantially annular clip having two portions, each portion having two end sections, wherein for each portion of the annular clip, the radial cross-section decreases from one end section to the other end section;

a centering member radially separated from the clip; and

at least one web joining the centering member to the clip, the at least one web being situated near one of the end sections of one of the two portions of the annular clip.

11. The snap ring of claim 10, wherein the centering member is configured as a centering ring having a center bore, the centering ring being positioned approximately concentrically with respect to the circumferential groove when the snap ring is installed in the circumferential groove.

12. The snap ring of claim 10, wherein the clip encircles the centering member, and the snap ring is configured as an internal ring for a radially inwardly open circumferential groove.

13. The snap ring of claim 10, wherein one of the end sections of each of the portions of the clip is formed as a lug.

14. The snap ring of claim 13, wherein the lugs have flat surfaces mutually opposing one another, the flat surfaces being used as mutual stop faces.

15. The snap ring of claim 14, wherein the flat surfaces of the lugs are aligned radially with respect to a midpoint of the snap ring.

16. A method of axially fixing a sealing ring in position, the sealing ring including at least one sealing lip which is provided for making contact on a shaft, the method comprising:

snapping a snap ring into a circumferential groove, the snap ring including:

a substantially annular clip having two portions, each portion having two end sections, wherein for each portion of the annular clip, the radial cross-section decreases from one end section to the other end section;

a centering member radially separated from the clip; and

at least one web joining the centering member to the clip, the at least one web being situated near one of the end sections of one of the two portions of the annular clip; and

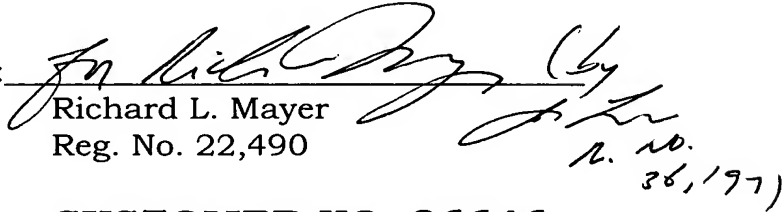
positioning the sealing ring in a position axially adjacent to the snap ring.

Respectfully submitted,

KENYON & KENYON

Dated: 11/5, 2004

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